REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1, 2, 4, 7-11, 13, 14, 16, 19-23 and 25-28 are presently pending in this application, Claims 6 and 18 having been canceled, and Claims 1, 4, 7-9, 13, 16, 19 and 20 having been amended by the present amendment.

In the outstanding Office Action, Claim 18 was rejected under 35 U.S.C. §112, second paragraph, for being indefinite; Claims 1, 7, 8, 10, 11, 25 and 26 were rejected under 35 U.S.C. §102(b) as being anticipated by Maebashi (U. S. Patent 5,098,571) as evidenced by "Glossary Metal Working Terms, Pg. 305" (hereinafter "Glossary"); Claims 2, 4, 6 and 9 were rejected under 35 U.S.C. §103(a) as being obvious over Maebashi in view of Waku et al. (U. S. Patent 5,981,415); Claims 13, 14, 19, 20, 22, 23, 27 and 28 were rejected under 35 U.S.C. §103(a) as being obvious over Maebashi as evidenced by Glossary in view of Larsen et al. (U. S. Patent 5,716,559); and Claims 14, 16, 18 and 21 were rejected under 35 U.S.C. §103(a) as being obvious over Maebashi and Larsen et al. in view of Waku et al.

With regard to the rejection under 35 U.S.C. §112, second paragraph, Claim 8 has been canceled herein. The remaining claims are believed to be in compliance with the requirements of the statute.

Claims 1, 4, 7-9, 13, 16, 19 and 20 have been amended to clarify the subject matter recited therein. These amendments are not believed to alter the scopes of the original claims, and no new matter is believed to be added thereby. If, however, the Examiner disagrees, the Examiner is invited to telephone the undersigned who will be happy to work in a joint effort to derive mutually satisfactory claim language.

Before addressing the rejection based on the cited reference, a brief review of Claim 1 as currently amended is believed to be helpful. Claim 1 is directed to a ceramic porous

sintered body and recites: "a sintered body comprising a plurality of ceramic coarse particles and a polycrystalline sintered body forming a bonding layer, the bonding layer existing between the ceramic coarse particles and connecting the ceramic particles, wherein the polycrystalline sintered body includes a plurality of ceramic fine particles having an average particle size smaller than the ceramic coarse particles, and the sintered body has an average pore diameter of 5 μm to 50 μm."

With such a bonding layer, thermal shock is mitigated and cracks are efficiently reduced or even prevented from occurring in the sintered body due to the breakage of ceramic particles when thermal stress is applied.[1] Also, the claimed polycrystalline sintered body reduces thermal stress and improves heat resistance by the sealing material layer. Furthermore, with such a structure, it is possible to catch particulates in the exhaust gas for long periods, reduce the deterioration of a catalyst when it is carried, prevent the breakage of the filter since minute cracks generated by impact, thermal stress or the like do not grow to be a visible size, prevent ceramic particles from shedding accompanied with the occurrence of cracks, improve its heat resistance, and adjust the size freely.[2]

It is respectfully submitted that Maebashi does not teach or suggest "a sintered body comprising a plurality of ceramic coarse particles and a polycrystalline sintered body forming a bonding layer, the bonding layer existing between the ceramic coarse particles and connecting the ceramic particles, wherein the polycrystalline sintered body includes a plurality of ceramic fine particles having an average particle size smaller than the ceramic coarse particles, and the sintered body has an average pore diameter of 5 μm to 50 μm" as recited in Claim 1.

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[1] See, for example, Specification, paragraphs [0017] and [0034].
[2] See, for example, Specification, paragraphs [0036] to [0038].

In particular, the Office Action states that "as illustrated in Figure 2, the coarse particles "4" have a bonding layer "5" between them ..." and that "the bonding layer will be a polycrystalline body due to polycrystalline being defined as a material produced from aggregates of fine particles bonded together." However, Maebashi describes a process for manufacturing a ceramic filter in which the filter is produced by preparing an aggregate consisting of alumina coarse particles and alumina-zirconia fine particles as a sintering aid. It is believed that the alumina coarse particles 4 and the alumina-zirconia mixed fine particles 5 shown in Figure 2 of Maebashi simply illustrate *a green body prior to the sintering process, rather than a sintered body.*[3] In fact, in the Maebashi method, the alumina-zirconia mixed fine particles 5 are used as a sintering aid for the alumina coarse particles 4, and a sintering aid works in a manner that it melts and forms a liquid layer between particles being sintered to increase wettability of the particle surfaces. It is believed that to that end, the Maebashi method states that *before the sintering step*, the alumina coarse particles and fine particles (sintering aid) may be blended in a surface-fusing apparatus to fusion-bond the fine particles (sintering aid). Based on the foregoing descriptions, it is believed that the sintered product resulted from the Maebashi method would include only the alumina coarse particles 4 but not the sintering aid in its original fine particular form 5. Therefore, the structure recited in Claim 1 is believed to be clearly distinguishable from Maebashi and is not anticipated thereby.

As discussed in the previous response, Waku et al. describes a ceramic composite material consisting of two or more crystal phases of different components and that the ceramic material used consists of at least one crystal phase having pore. Nevertheless, Waku et al. fails to disclose the sizes of coarse and fine particles and pores defined by the particles, therefore, the bonding layer connecting the coarse particles together cannot be identified at all. As such, Waku et al. fails to disclose or suggest the polycrystalline sintered body forming a

[3] See, for example, Mebashi, column 2, line 45, to column 3, line 21.

bonding layer as recited in Claim 1, and the structure recited in Claim 1 is believed to be distinguishable from Waku et al.

Larsen et al. is a secondary reference cited for the subject matters pertaining to ceramic filters recited in Claims 13, 14, 19, 20, 22, 23, 27 and 28, and is not believed to teach or suggest "a sintered body comprising a plurality of ceramic coarse particles and a polycrystalline sintered body forming a bonding layer, the bonding layer existing between the ceramic coarse particles and connecting the ceramic particles, wherein the polycrystalline sintered body includes a plurality of ceramic fine particles having an average particle size smaller than the ceramic coarse particles, and the sintered body has an average pore diameter of 5 μm to 50 μm" as recited in Claim 1. Thus, the structure recited in Claim 1 is believed to be distinguishable from Larsen et al.

Furthermore, because none of Maebashi, Larsen et al. and Waku et al. discloses the sintered body as recited in Claim 1, their teachings even in combination are not believed to render the structure recited in Claim 1 obvious.

Likewise, Claim 13 recites "a pillar-shaped porous ceramic member having a plurality of cells for a gas passageways in a longitudinal direction of the pillar-shaped porous ceramic member and comprising a ceramic porous sintered body including a plurality of ceramic coarse particles and a polycrystalline sintered body forming a bonding layer, the bonding layer connecting and existing between the ceramic coarse particles, wherein the bonding layer includes a plurality of ceramic fine particles having an average particle size smaller than the ceramic coarse particles, and the ceramic porous sintered body has an average pore diameter of 5 μm to 50 μm" and is also believed to be distinguishable from Maebashi, Larsen et al. and Waku et al.

For the foregoing reasons, Claims 1 and 13 are believed to be allowable. Furthermore, since Claims 2, 4, 7-11, 14, 16, 19-23 and 25-28 depend directly or indirectly

from either Claim 1 or 13, substantially the same arguments set forth above also apply to these dependent claims. Hence, Claims 2, 4, 7-11, 14, 16, 19-23 and 25-28 are believed to be allowable as well.

In view of the amendments and discussions presented above, Applicants respectfully submit that the present application is in condition for allowance, and an early action favorable to that effect is earnestly solicited.

Respectfully submitted,

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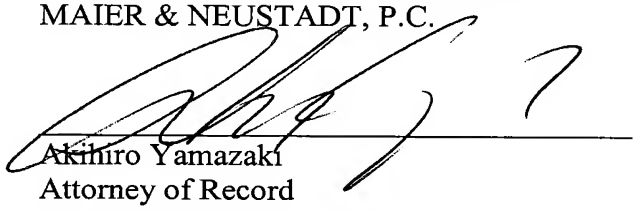

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